

REMARKS

Reconsideration of the application is requested.

Applicants appreciatively acknowledge the Examiner's confirmation of receipt of applicant's information disclosure statement submitted on April 16, 2003.

Claims 1-20 remain in the application. Claims 1, 3, 5, 14, 18, and 19 have been amended. A marked-up version of the claims is attached hereto.

In item 4 on page 2 of the above-identified Office Action, claims 1 - 3, 5, 12, 14, 15, and 18 have been rejected as being fully anticipated by Dodd et al. (U.S. Patent No. 5,339,073) under 35 U.S.C. § 102.

The rejections have been noted and claims 1, 3, 5, 14, 18, and 19 have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found on page 10, lines 10-25 of the specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Amended claim 1 calls for, *inter alia*:

a functional monitoring system, comprising:

a transmitting and receiving station configured to transmit an interrogation code signal; and

a plurality of transponders each configured to respond to the interrogation code signal upon receiving the interrogation code signal by generating and **simultaneously transmitting in temporal synchronization a response code** to said transmitting and receiving station.

It is thus the object of the invention of the instant application to cause a plurality of transponders to transmit a multibit code word, simultaneously with each other, to an interrogation-signal-sending transponder (page 10, lines 10-26). Initially, all transponders in the configuration, which are assigned to the object or motor vehicle, have the same code word. The transmission and receiving station transmits an interrogation code signal once, to which the transponders **synchronously** answer **simultaneously** with their code signals. The Merriam-Webster English dictionary, 2003, defines a "code" as: "a **system** of signals or symbols for communication". Hence, coded answer signals, as called for in amended claim 1, and described on page 10, line 20, are known to those skilled in the art to be multiple bit transmissions. With the synchronization of the transmittal of the coded answer signals, all signals arrive simultaneously at the transmission and receiving unit in the motor vehicle and all of the code words are presented simultaneously bit by bit.

The Dodd et al. reference discloses an access control system having an interrogation unit and a plurality of transponders. Each transponder has its own code or code word with a certain number of bits (col. 4, lines 13-17). The object is to recognize which transponder is present in the vicinity of the interrogation unit. For this purpose, each bit of the code word is **interrogated one by one** (col. 4, lines 14 to 17). If a transponder has a bit (i.e., a logical 1) at the interrogated location, it transmits an answer signal back to the interrogation unit. There, it is then registered that at least one transponder with this bit is present in the vicinity. **One after the other**, all bits of the code word are then interrogated so that in the end it is clear which transponder is present in the vicinity (col. 4, lines 15-29).

In Dodd et al., after the interrogation of only one bit it may be that several transponders have this one bit and thus answer simultaneously. As a result, when all transponders having this interrogated bit answer, the answer signals with these bits can overlap and a logical 1 as total signal in this bit remains (col. 4, lines 59 to 63). The interrogation signal can thereby serve as a synchronization signal for the synchronized transmission of the answer signal (col. 5, lines 11 to 15). However, an authorization **code** is not transmitted

back as a whole with the answer, but only the fact that a plurality of transponders with this bit answer at the same time. In order to have a clear answer as to which transponders are present, the entire method must run through as often as the number of bits of the code word (col. 4, lines 21-28).

Therefore, in Dodd et al. the simultaneous answering only occurs with one single bit as the answer. In order to determine the entire code word, and thus all of the transponders within reach, a plurality of steps must be carried out in which one bit each of the code word is interrogated. Thus, during the complete process, **at least once, only a single transponder answers, i.e., at least one time there is no overlapping.**

Clearly, Dodd et al do not show a plurality of transponders each configured to respond to the interrogation code signal upon receiving the interrogation code signal by generating and simultaneously transmitting in temporal synchronization a response code to said transmitting and receiving station, as recited in amended claim 1 of the instant application.

It is accordingly believed to be clear that Dodd et al. do not show or suggest the features of amended claim 1. Amended

claim 1 is, therefore, believed to be patentable over the art. For at least the same reasons that amended claim 1 is believed to be patentable over Dodd et al., amended claim 14 is also believed to be patentable. The dependent claims are believed to be patentable as well because they all are ultimately dependent on amended claims 1 and 14.

In item 6 on page 3 of the above-identified Office Action, claims 1 - 6, 8, 9, 11, 12, and 14 - 20 have been rejected as being obvious over Shober (U.S. Patent No. 5,952,922) in view of Dodd et al. (U.S. Patent No. 5,339,073) under 35 U.S.C. § 103(a).

For discussion of the invention of the instant application, please see above. Shober discloses a radio communications system that can operate in one of several modes, which integrate in-building security, location determination, messaging, and data communications capabilities. The radio communication system includes at least one interrogator for generating and transmitting a radio signal. One or more Tags of the system receive the radio signal. A Backscatter Modulator modulates the reflection of the radio signal using a subcarrier signal, thereby forming a reflected modulated signal. The Interrogator receives and demodulates the reflected modulated signal. The Interrogator can also

transmit a first information signal to one or more tags, specifying which tags should respond. In the Location Mode, the radio communications system can instruct some or all Interrogators to determine the location of a Tag or Tags within the building, regardless of whether the Tag or Tags are in radio range of the Interrogation Mode. In the Messaging, or low speed data communications Mode, the radio communications system can instruct some or all Interrogators to transmit a command addressed to a particular Tag or Tags, regardless of whether the Tag or Tags are in the reading field of the Interrogation Mode.

Shober does not show a plurality of transponders each configured to respond to the interrogation code signal upon receiving the interrogation code signal by generating and simultaneously transmitting in temporal synchronization a response code to said transmitting and receiving station, as recited in amended claim 1 of the instant application.

Dodd et al. do not teach the synchronous transmission of the answer signals of the transponders generally simultaneously. Dodd et al. teach a succession of multiple steps, whereby single bits are transmitted until a requisite plurality of bits having a 1 have been received without an error or an overlapping having a negative effect. Even if the method

according to Dodd et al. were to be used in Schober, one would not reach invention of the instant application because Dodd et al. teach interrogation of individual bits and not the complete code, as it is interrogated in Schober or from the instant application.

Accordingly, a combination of the two prior art references, Dodd et al. and Shober, will not lead to the present invention. Amended claims 1 and 14 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 and 14.

In item 7 on page 6 of the above-identified Office Action, claims 1, 6, 7, 10, and 14 have been rejected as being obvious over Schuermann (U.S. Patent No. 5,347,280) in view of Dodd et al. (U.S. Patent No. 5,339,073) under 35 U.S.C. § 103(a).

Schuermann discloses a method of communicating between a transponder and an interrogator. The interrogator transmits a wireless RF interrogation which is received by the transponder. The transponder then transmits a wireless RF response. The wireless RF response has a first channel response centered at frequency $FDX1=RF+SC$, a second channel

response centered at frequency $FDX2=RF-SC$, and a third channel response centered at frequency $FDX3=SC$. The interrogator receives this wireless RF response. The response is received in the three channels with a first circuit operable to receive the first channel response, a second circuit operable to receive the second channel response, and a third circuit operable to receive the third channel response. A controller then selects the response from one of the first, second, or third circuits for demodulating. A demodulator may then demodulate one the selected channel responses.

As the Examiner notes in the first paragraph on page 7 of the Office action, Schuermann omits teaching that the transponders simultaneously transmit their response signals. The deficiencies of Dodd et al. are explained above. Therefore, a combination of the two prior art references Dodd et al. and Schuermann will not lead to the object of the present invention because a person of skill in the art does not obtain the information from Dodd et al. to synchronously transmit the answer signals of the transponders generally simultaneously.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either

show or suggest the features of amended claims 1 and 14.

Amended claims 1 and 14 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 and 14.

In item 8 on page 8 of the above-identified Office Action, claims 1, 2, and 12 - 14 have been rejected as being obvious over Schuermann (U.S. Patent No. 5,347,280) in view of Dodd et al. (U.S. Patent No. 5,339,073) under 35 U.S.C. § 103(a).

For at least the same reasons stated in the preceding paragraphs, applicants believe it to be clear that neither Schuermann nor Dodd et al., whether taken alone or in any combination, either show or suggest the features of amended claims 1 and 14. Amended claims 1 and 14 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 and 14.

In view of the foregoing, reconsideration and allowance of claims 1-20 is solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a

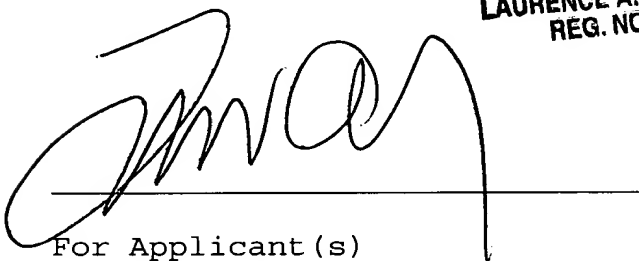
telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time is required for this paper, Petition for extension is herewith made.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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For Applicant(s)

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